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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/660,025	09/12/2000	Fabio M. Chiussi	21--9-8-5	5851

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EXAMINER	
JAIN, RAJ K	
ART UNIT	**PAPER NUMBER**
2664	

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/660,025	CHIUSSI ET AL.	
	Examiner	Art Unit	
	Raj K. Jain	2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 May 2005* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 7-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4, 7-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4, 7-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan et al (US Pat. 6324165 B1) in view of Basso et al (US Pat. 5,787,071), further in view of Chen et al (US Pat 6,188,674 B1).

Regarding claims 1 & 17, Fan discloses a dynamic scheduling scheme, which uses large capacity switch architecture for admission control (see abstract and Fig 1), Fan's system comprises of;

- aggregating one or more component traffic flows into a component traffic stream (see Fig 2a, col 6 lines 21-27, each VC queue consists of incoming traffic flow that is aggregated into a traffic stream);

- aggregating one or more component traffic streams into an aggregate stream (See Fig 1 and 2a, col 5 lines 20-25, the VCi queue traffic streams are aggregated into one Ipi stream);

- carrying the aggregate stream in a single, FIFO queue (see col10 lines 60-67, col 11 lines 25-30 the use of FIFO is disclosed as a DRC scheduler using peak rate buffer); and

Further, with respect to claim 17, Fan also provides the means for dynamic flow control as necessary (see col 6 lines 43-55, col 8 lines 39-65).

Fan fails to disclose the use of "selective" backpressure signaling for traffic regulation.

Basso discloses traffic regulation via backpressure mechanism and more specifically selective backpressure (see abstract, Figs 11 and 12, col 2 lines 44-46, col 6 lines 25-40). Selective backpressure provides for an efficient traffic control apparatus, in which traffic control information is never blocked on a congested link or connection.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the selective backpressure technique of Basso within Fan so as to provide for an efficient traffic control apparatus, in which traffic control information is never blocked on a congested link or connection.

Furthermore, Fan and Basso fail to disclose the use of a credit counter for each component traffic stream that initializes, decrements, increments and resets the said counter as desired.

Chen discloses the use of a credit counter for each component traffic stream that initializes, decrements, increments and resets the said counter as appropriate, (see col 3 line 60- col 4 line 30).

Chen describes a method for packet loss measurement in high-speed switches by identifying traffic flows in the ingress side of switches, and measuring packets losses for the identified flows on the egress side of the switches. The packet flow scheme of Chen provides an ongoing update of how many packets have been lost within a switch or node and further to prevent overflow of same switch/node and thus reducing further packet loss and increasing link efficiency.

Therefore it would have been obvious to one of ordinary skill in the art to include the packet counter scheme of Chen within Fan so as to reduce packet loss and increase link efficiency.

Regarding claim 2, Fan discloses QoS for the traffic flows according to their destinations and traffic flow requirements, (see col 10 lines 25-30).

Regarding claim 3, Fan discloses aggregating of traffic streams based on per flow of VC's, (see cols 6 lines 22-27).

Regarding claim 4, Fan discloses aggregation of traffic with or without delay (see col 11 line 65 - col 12 line 5).

Regarding claims 15, Basso discloses selective backpressure for a counter that reaches a predetermined threshold (see Fig 6, col 4 lines 15-25, lines 37-60), providing flow control applying the best effort technique affords throttling only the queue connection that exceeds a given threshold.

Regarding claims 7, 8, 10, and 12, Fan discloses a traffic shaping system which increases the connection-carrying capacity of a network node by using a scheduler for

scheduling of cells to increase the admissible number of connections (see abstract and Figs 1, 2).

Basso discloses traffic control using selective backpressure scheme on a node-by-node basis.

Fan and Basso fail to disclose the use of a credit counter for each component traffic stream that initializes, decrements, increments and resets the said counter as desired.

Chen discloses the use of a credit counter for each component traffic stream that initializes, decrements, increments and resets the said counter as appropriate, (see col 3 line 60- col 4 line 30). Chen also shows that the invention can also include aggregate flow measurements if so desired (see col 7 lines 20-40).

Chen describes a method for packet loss measurement in high-speed switches by identifying traffic flows in the ingress side of switches, and measuring packets losses for the identified flows on the egress side of the switches. The packet flow scheme of Chen provides an ongoing update of how many packets have been lost within a switch or node and further to prevent overflow of same switch/node and thus reducing further packet loss and increasing link efficiency.

Therefore it would have been obvious to one of ordinary skill in the art to include the packet counter scheme of Chen within Fan so as to reduce packet loss and increase link efficiency.

Regarding claims 9 and 11, Basso discloses guaranteed bandwidth traffic based on QoS and best effort traffic based on non-reserved bandwidth (see col 1 lines 20-30, 40-45, col 2 line 40).

Regarding claim 13, Basso discloses controlling the queue counter via selective stop backpressure signaling (see col 6 lines 35-52).

Regarding claims 14 and 16, Fan discloses maintaining peak flow rate using the DRC scheduler that insure minimum rate guarantee for all connections (see col 11 lines 1-30).

Response to Arguments

Applicant's arguments with respect to claims 1-4 and 7-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raj Jain whose telephone number is 571-272-3145. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

RJ
June 21, 2005

WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER